

**Before the
Federal Communications Commission
Washington, D.C.**

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of

Amendment of Part 90 of the Commission's Rules Pertaining to End User and Mobile Licensing Information

RM-7407
RM-7749
PR Docket No. 92-78

To: The Commission

Comments of PacTel Paging

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Summary

PacTel Paging is commenting on the proposed rule changes respecting the circumstances under which PCP licensees must file modification of license applications to reflect changes in the number of paging units they serve.

PacTel submits that there are circumstances in which a PCP operator should be relieved of the obligation of filing modification applications of this nature. In particular, when a PCP operator earns exclusivity protection pursuant to the rule changes under consideration in RM-7986, no useful purpose would be served by requiring continual license modifications.

In instances where license modifications are still appropriate, PacTel submits that the Commission should use bouncing busy hour utilization benchmarks based upon actual traffic loading analyses rather than focusing upon a percentage increase in the number of units in service.

Finally, PacTel urges the Commission to adopt a simplified reporting form for modifications of this nature so that redundant technical system information need not be assembled and filed.

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RM-7400 OFFICE OF THE SECRETARY
RM-7749
PR Docket No. 92-78

To: The Commission

COMMENTS OF PACTEL PAGING

PacTel Paging ("PacTel"), by its attorneys, hereby submits its Comments on the Commission's above-captioned Notice of Proposed Rulemaking pertaining to End User and Mobile Licensing Information (the "NPRM").

I. INTRODUCTION

PacTel is a licensee under Part 90 of the Commission's Rules for one-way private carrier paging ("PCP") and SMR frequencies. PacTel has established several wide area 929 MHz PCP systems in California, Nevada, and Arizona, and has been authorized for additional 929 MHz PCP systems in Georgia and Florida. PacTel employs efficient channel utilization techniques in these systems. For example, PacTel was one of the first carriers in the nation to test 2400 baud paging systems. PacTel has also worked with others in the industry to encourage manufacturers to begin delivering 2400 baud pagers for PCP channels. As a result

of its efforts to develop and improve PCP systems, PacTel now serves in excess of 70,000 paging units over its PCP systems, making it one of the largest and most efficient providers of PCP service in the nation.

PacTel applauds the Commission for releasing an NPRM which addresses several important PCP issues.^{1/} In its NPRM, the Commission has posed three questions regarding PCP operations that PacTel seeks to help answer in these comments: (1) Are there instances in which a PCP licensee should be relieved of the obligation to modify its license to reflect the addition of new units? (2) What loading criterion best reflects the usage of a PCP channel, and, is there any way, using such measure, to promote efficient use of the spectrum? (3) If a license modification is required when additional units are added, should those license modifications be sent through the coordinator?

PacTel will address each of these issues in separate sections below. PacTel also provides in attachments to these Comments proposed language for the rule changes it

^{1/} The instant proceeding is one of several in which the Commission is considering significant PCP issues. See, e.g., RM-7986 (proposing to grant PCP licensees exclusive use of frequencies in geographic areas where they build extensive systems); NABER Petition filed June 4, 1992 (proposing to allow PCP operators to provide service to individual users). In this proceeding, PacTel has limited its comments solely to PCP issues.

advocates, and a draft form for the modification application it envisions.

II. UNDER SOME CIRCUMSTANCES A PCP LICENSEE
SHOULD NOT BE REQUIRED TO MODIFY ITS
LICENSE WHEN CHANNEL USE INCREASES

The NPRM asked whether there is any need, after the initial licensing of systems on paging-only channels, for a modification of a system's license to authorize a change in the number of paging units. PacTel submits that it is useful to retain a mechanism for monitoring the usage of shared channels.^{2/} There is, however, no need for such a mechanism for PCP systems which, under rules now being actively considered by the Commission, are accorded the exclusive use of a 929-930 MHz frequency in a particular geographic area.

As the Commission knows, the Association of Private Carrier Paging ("APCP") has petitioned the Commission for rule changes that would grant PCP operators a measure of exclusivity in geographic areas where they operate a certain threshold number of transmitters.^{3/} The APCP petition has

^{2/} One of the main purposes of the license modification requirement is to allow the Commission and the coordinator to assess the usage on a particular channel.

^{3/} In the Matter of Amendment of Section 90.494 of the Commission's Rules and Regulations Concerning Shared Use of 900 MHz Paging Frequencies, RM-7986

been assigned a rulemaking number by the Commission (RM-7986), and has received support from a broad cross-section of the private paging industry, including PacTel, because it will encourage the development of 900 MHz band PCP systems and, ultimately, reduce congestion and sharing problems in the VHF band.

PacTel proposes that the Commission eliminate any license modification requirements regarding channel loading or occupancy with respect to PCP systems which have been granted exclusivity under the rules adopted pursuant to the APCP Petition for Rulemaking in RM-7986.^{4/} When the Commission grants protection to systems covered by APCP's

(Public Notice 1889, Released May 11, 1992). In summary, APCP's Petition would grant protection to a 900 MHz PCP system which consists of a certain threshold numbers of transmitters. The APCP Petition proposes that (i) a system which consists of 6 or more transmitters (18 in Los Angeles, New York, and Chicago) in a metropolitan area would be granted protection for that metropolitan area, (ii) a system comprised of 70 or more transmitters in a 12 state region would be granted protection for that region, and (iii) a system consisting of 300 or more transmitters would be entitled to protection of that frequency nationwide.

^{4/} PacTel recommends that the APCP rulemaking request be put on a fast track so that it can be resolved in the same time frame as the instant proceeding.

Petition, the license modification requirements discussed in this NPRM would serve no useful purpose.^{5/}

III. THE COMMISSION SHOULD UTILIZE A BOUNCING
BUSY HOUR ANALYSIS TO DETERMINE
THE CAPACITY AVAILABLE ON A CHANNEL

In the NPRM, the Commission tentatively proposed that a PCP licensee file a license modification whenever it increases the number of paging units on a channel by more than 35%.^{6/} Alternatively, the Commission asked whether a better approach might be to establish some measure of channel occupancy that would take into account both the number of units and the time used.^{7/} PacTel submits that a license modification standard based solely upon the number of units in service is not a particularly helpful measure

^{5/} If a system is protected from co-channel licensees in a particular area, there will be no sharing of the channel with that system by other systems in the same area. Thus, the requirement for a licensee to state how many paging units it will serve on a system has no purpose for these protected systems. In effect, the requirement for an operator to build a minimum number of transmitters to receive exclusive use of a frequency acts as a substitute for channel loading as a regulatory technique to encourage efficient channel utilization.

^{6/} NPRM at para. 22.

^{7/} NPRM at paras. 24-25.

and may, in fact, lead to an inaccurate picture of channel utilization.

As the Commission astutely notes in the NPRM, different types of paging service consume considerably differing amounts of system capacity.^{8/} Therefore, a measure which uses solely the number of units in service will not provide the Commission with a complete picture of channel utilization and airtime used. It would serve no useful purpose for licensees and the Commission to go through the processing of modification applications which fail to provide the agency with meaningful licensing information.

In addition, a modification of license standard based upon a percentage increase in units will have a disproportionate adverse impact on smaller carriers. For example, a carrier serving 1000 units will be forced to modify its license when 350 units are added under the 35% standard. In contrast, a carrier serving 50,000 units could add over 15,000 units under the same standard without need for a license modification. This disparity points out the problem with any standard based upon a percentage increase in the numbers of units.

^{8/} For example, a single voice pager uses roughly 100 times the airtime as a single 1200 baud digital pager.

Disparities also will exist under the proposed standard due to the different amounts of channel time that various types of paging service consume. A carrier operating a high-speed tone-only or numeric display system could add 1,000 units to the system without significantly impacting the channel usage. In contrast, the addition of 1,000 voice paging units to a system would have a dramatic effect upon the channel occupancy. Yet, a modification of license standard based solely upon a percentage increase in units would fail to distinguish between these two situations.

PacTel proposes that the Commission adopt a license modification requirement that focuses on the licensee achieving certain capacity utilization benchmarks (such as 20%, 40%, 60%, 80%, and 100% of capacity utilized). In an initial application for service, the applicant would indicate the percentage of the channel that the applicant expected to occupy by the end of the first year of operation and would be authorized accordingly.^{2/} If, during that initial one year period or any time thereafter, the licensee's actual usage exceeded the authorized benchmark, the licensee would file a license modification with the

^{2/} The Commission might decide that the highest authorized occupancy to be granted in an initial license application would be 80% unless the minimum number of transmitters was proposed to qualify the applicant for exclusivity in a particular area.

Commission substituting the new utilization benchmark.^{10/} Similarly, if after the initial one-year period the channel occupancy dropped below the occupancy percentage listed on the authorization, the licensee would be obligated to file a modification decreasing the utilization benchmark accordingly. Using a standard of this nature for license modification that is based upon actual channel usage will give the Commission and the coordinator a much better picture of the utilization of a certain channel.

The Commission has also requested comment on the appropriate way to measure channel usage if a standard other than number of units is to be used as a modification of license standard.^{11/} PacTel submits that the Commission should adopt a bouncing busy hour standard based upon traffic loading studies similar to those utilized by radio common carriers licensed under Part 22 of the Rules.^{12/} A

^{10/} For example, a licensee would initially file a license application stating the amount of capacity to be utilized within the first year of operation (e.g., 20%). Once the license exceeds the initial capacity amount listed on the license (e.g., 20% of capacity used), the licensee would file a license modification with the Commission increasing the amount of capacity used to the next threshold percentage (e.g., 40% of capacity used).

^{11/} NPRM at para. 25.

^{12/} See Section 22.516(b) of the Commission's Rules. PacTel holds numerous licenses under Part 22, and thus is familiar with the manner in which such studies are conducted and utilized in the radio common carrier service.

paging channel is typically considered loaded when there is no substantial capacity left during the busiest hour of the day for paging messages (typically around 4:00-5:00 p.m., although it varies from system to system). The bouncing busy hour analysis would determine the amount of capacity available during the time the system experiences the most use. This would give the Commission the clearest picture of the amount of capacity used on a channel.^{13/}

In order to assist the Commission in developing rules that implement the concepts presented by PacTel in these Comments, a set of draft rules is included in Attachment 1 for the consideration of the Commission and other interested parties.

The Commission also could modify the manner in which traffic loading studies were conducted in order to discourage the use of inefficient paging technologies. For example, in measuring channel usage, the Commission could decline to give carriers credit for voice traffic which consumes more airtime. Or, the Commission could discount the channel occupancy if the reporting carrier was utilizing

^{13/} The Commission is considering eliminating traffic loading study requirements under Part 22 of the rules. See Part 22 Rewrite, FCC 92-205, released June 12, 1992 (CC Docket No. 92-115). This proposal is based upon considerations unique to the radio common carrier services. PacTel submits that traffic loading studies could continue to be a valuable regulatory tool when dealing with shared spectrum in the private services.

comparatively low baud rate transmission speeds. After carefully considering these alternatives, PacTel has concluded that there will be significant problems with trying to force efficiency on existing paging operators through the use of mechanisms of this nature.^{14/}

First, any presumption that an inefficient operator will modernize its system to avoid further channel sharing is suspect. It is more likely to be a subsequent licensee authorized to share a channel who will suffer from the first licensee's inefficiencies. For example, if a system has 2,000 voice pagers, there really is no airtime left in the busy hour. Yet, if voice paging traffic is eliminated from the traffic loading study analysis, the Commission and the coordinator would then assign the channel to new licensees. When the new licensee tried to send traffic, it would find no airtime available to do so.

Second, most of the current sharing problems exist in metropolitan areas. In the rural areas, there is probably sufficient capacity for all technologies, even those that consume more spectrum.^{15/} For example, voice paging plays a

^{14/} PacTel does not support forced refarming of channels which currently have subscribers. If the Commission adopted such a proposal, it could expect significant opposition from many private carrier paging operators.

^{15/} A problem can develop with channel utilization in rural and metropolitan areas where a metropolitan system extends, because of market demand, into rural areas. In that case, an inefficient rural system could have

large role in rural markets. It is not clear in the absence of a spectrum shortage in rural markets that it would serve the public interest to eliminate this service which enjoys market acceptance.^{16/}

Third, the Commission would have to address how airtime is to be allotted between numerous co-channel licensees in order for there to be any mechanism for comparing the relative efficiency of those using the same channel. One approach would be for the Commission to require all licensees on a channel to interconnect their paging terminals. The Commission, however, just recently declined to impose such a requirement despite a request by APCP.^{17/} There would appear to be no reason to suspect that the Commission is prepared to reach a different conclusion at this time.

significant impact on the metropolitan area system, which are significantly congested today.

^{16/} Many of the paging operators in rural areas are small carriers which could not afford the expense of swapping inefficient pagers with more efficient pagers. Furthermore, inefficient technologies may better serve the needs of rural customers. In fact, one study recently suggested that there is significant demand for voice paging. See, "The Market for Digital Voice Pagers with Voice Storage Capabilities", Economic and Management Consultants International, Inc., filed with Paging Network's Comments in Emerging Technologies Docket 92-100.

^{17/} See Shared Use of Paging Frequencies, 7 FCC Rcd. 1591 (1992).

In sum, it may be too difficult to craft rules that will force inefficient technologies off existing bands. PacTel believes that incentives, rather than penalties, have proved in the past to bring better results. PacTel proposes, therefore, that the Commission adopt measures, such as granting exclusivity or tax certificates, which would encourage operators to voluntarily upgrade their systems to the more efficient technologies.

IV. THE PROCEDURES FOR LICENSE MODIFICATIONS SHOULD BE CHANGED

In the NPRM, the Commission poses the question whether license modifications to change the number of users served must be submitted through the coordinator. Assuming that the Commission adopts the standards proposed by PacTel as to when such modifications are required^{18/}, PacTel does not particularly care whether required submissions go directly to the agency or are filed through the coordinator. PacTel feels strongly, however, that at the very least the coordinator must be copied by either the licensee or the Commission with all such filings. Capacity utilization

^{18/} The situations where license modifications would still be of value is where channels are still shared, such as the VHF and UHF PCP channels, and those 929-930 MHz channels in which no licensee has built a system earning them exclusivity.

information is extremely important in deciding whether a channel can support additional licensees. Without such information, the coordinator would be unable to properly coordinate applications, and the current coordination process would suffer.

There is another aspect of the license modification process that also is very important to PacTel and deserves the Commission's attention. Currently, in order to modify a license to specify an increase in paging units, a licensee must refile the entire license document, including all engineering and site data, even though these aspects of the operation have not changed. This process is unduly burdensome for the carrier and would appear to be of no particular use when the filing only affects the capacity and not the technical parameters of the system. PacTel submits that modifications of this nature could be done with considerably less paperwork, which would benefit both the carrier and the agency.

PacTel proposes that the Commission adopt a simple new form for use in modifying licenses with regard to the channel utilization. To assist in this effort, PacTel designed a new form, a copy of which is included as Attachment 2. This form requires only information relating to the Call Sign, Applicant name, amount of total capacity

used, and contact information.^{19/} PacTel urges the Commission to adopt a simplified reporting mechanism for changes of this nature.

^{19/} PacTel also proposes that the Commission allow licensees to consolidate this information for all of its Call Signs which constitute one system on one form. The Commission's current Rules allow only 6 stations per Call Sign. A system can consist of 50-100 or more transmitters. A requirement that the licensee file a separate form for each Call Sign is unduly burdensome and serves no logical purpose.

IV. CONCLUSION

The foregoing premises having been duly considered,
PacTel respectfully requests that the subject rules be
modified in a manner consistent with these comments.

Respectfully submitted,

PACTEL PAGING

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Dated: June 26, 1992

ATTACHMENT 1

90.119 Application Forms.

* * * * *

(f) Form 574a shall be used to apply for modification of an existing authorization to increase the amount of capacity authorized for paging-only channels.

90.135 Modification of license.

(a) * * *

(8) After the first year of license operation, a variance upward or downward in the amount of capacity utilized by systems licensed on paging-only channels as compared to the percentage of channel capacity reflected on the shared system license. During the first year of system operation, only variances upward require a modification of license. The licensee shall adopt procedures to monitor its utilization of the channel to comply with this section and shall provide a copy of a traffic load study performed pursuant to Section 90.160 as part of the application for modification of license.

(b) * * *

(6) Change in the amount of capacity authorized for systems licensed for exclusive rather than shared use in a particular area under this Part on 929-930 MHz one-way paging channels.

90.160 Capacity Loading Study.

(a) To determine the amount of capacity utilized on a one-way paging channel a traffic load study shall be done by the licensee. The traffic load study shall state the time and date of the study, which shall be within 30 days of the license modification filing, and provide:

- (1) A survey of the traffic on the channel for three days in a seven day period having normal usage.
- (2) The percentage of time that the channel was in use by the licensee during the busiest hour on each of three days of the study.

The percentage of channel occupancy shall be considered to be equal to the average three percentages reported pursuant

to subsection (a)(2) above.

90.175 Frequency coordination requirements.

(f) * * *

(7) Applications for modification of license that involve a change in the number of mobile or paging transmitters from that authorized as required by Section 90.135(a)(5) and (a)(8); provided that there is no change in the technical parameters (e.g., frequency, type of emission, power, antenna height, location, or number of base stations or fixed or control transmitters, or area of mobile or paging operations) of the existing system, and the existing system is not licensed in the 470-512 MHz band or on 800 MHz conventional channels; provided further that the applicant shall submit a copy of the modification of license to the frequency coordinator.

Federal Communications Commission
APPLICATION FOR MODIFICATION OF LICENSE FOR MODIFIED USAGE

IMPORTANT NOTICE: ALL applicants MUST include the PROPER FEE with their Application and MUST FILE those applications at the PROPER LOCATION. Refer to the current fee publication or contact the Consumer Assistance Branch, Federal Communications Commission, Gettysburg, PA 17326 (717) 337-1212.

1. Applicant/Licensee Name:			
2. Mailing Address (Number & Street, P.O. Box or Rt. No.): ATTN: ADDRESS:			
3. City	4. State	5. ZIP Code	
6. Call Sign:			
7. Total Capacity Used: <input type="checkbox"/> 20% <input type="checkbox"/> 40% <input type="checkbox"/> 60% <input type="checkbox"/> 80% <input type="checkbox"/> 100%			
8. Individual completing this application form(s): Telephone No. ()			

CERTIFICATION, READ CAREFULLY BEFORE SIGNING

- 1) Applicant certifies that all statements made in this application and attachments are true, complete, correct, and made in good faith.
- 2) Applicant certifies that the signature is that of the individual, or partner, or officer or duly authorized employee of a corporation, or officer who is a member of an unincorporated association, or appropriate elected or appointed official on behalf of a governmental entity.

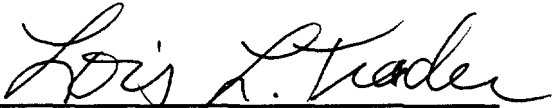
WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT. US CODE TITLE 18, SECTION 1001

Typed/Printed Name:	Telephone No: ()
Signature: "MUST BE ORIGINAL"	Date:

CERTIFICATE OF SERVICE

I, Lois L. Trader, hereby certify that on this 26th day of June, 1992, I caused copies of the foregoing Comments of PacTel Paging to be sent via hand delivery to the following:

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Lois L. Trader